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Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala  
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His  
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val  
65 70 75 80

684492SequenceListing.txt

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                   100                  105                  110  
 Leu Cys Arg Val Ile Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp  
                   115                  120                  125  
 Glu Val Tyr Ala Gln Ile Thr Leu Leu Pro Glu Ala Asn Gln Asp Glu  
                   130                  135                  140  
 Asn Ala Ile Glu Lys Glu Ala Pro Leu Pro Pro Pro Arg Phe Gln  
                   145                  150                  155                  160  
 Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His  
                   165                  170                  175  
 Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro  
                   180                  185  
 Leu Asp Met Ser Arg Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp  
                   195                  200                  205  
 Leu His Ala Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro  
                   210                  215                  220  
 Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys  
                   225                  230                  235                  240  
 Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly  
                   245                  250                  255  
 Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val  
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 Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu Ala  
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684492SequenceListing.txt

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Lys Pro Arg Thr Ser Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr  
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Met Glu Ser Val Lys Asn Asn Tyr Ser Ile Gly Met Arg Phe Lys Met  
 325 330 335

Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile  
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Val Gly Ile Glu Glu Ser Asp Pro Thr Arg Trp Pro Lys Ser Lys Trp  
 355 360 365

Arg Ser Leu Lys Val Arg Trp Asp Glu Thr Ser Ser Ile Pro Arg Pro  
 370 375 380

Asp Arg Val Ser Pro Trp Lys Val Glu Pro Ala Leu Ala Pro Pro Ala  
 385 390 395 400

Leu Ser Pro Val Pro Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Ile  
 405 410 415

Ala Pro Ser Ser Pro Asp Ser Ser Met Leu Thr Arg Glu Gly Thr Thr  
 420 425 430

Lys Ala Asn Met Asp Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu  
 435 440 445

Gln Gly Gln Glu Tyr Ser Thr Leu Arg Thr Lys His Thr Glu Ser Val  
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Glu Cys Asp Ala Pro Glu Asn Ser Val Val Trp Gln Ser Ser Ala Asp  
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Asp Asp Lys Val Asp Val Val Ser Gly Ser Arg Arg Tyr Gly Ser Glu  
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684492SequenceListing.txt

Asn Trp Met Ser Ser Ala Arg His Glu Pro Thr Tyr Thr Asp Leu Leu  
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 Ser Gly Phe Gly Thr Asn Ile Asp Pro Ser His Gly Gln Arg Ile Pro  
                   515                  520                  525  
 Phe Tyr Asp His Ser Ser Ser Pro Ser Met Pro Ala Lys Arg Ile Leu  
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 Ser Asp Ser Glu Gly Lys Phe Asp Tyr Leu Ala Asn Gln Trp Gln Met  
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 Ile His Ser Gly Leu Ser Leu Lys Leu His Glu Ser Pro Lys Val Pro  
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 Ala Ala Thr Asp Ala Ser Leu Gln Gly Arg Cys Asn Val Lys Tyr Ser  
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 Glu Tyr Pro Val Leu Asn Gly Leu Ser Thr Glu Asn Ala Gly Gly Asn  
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 Trp Pro Ile Arg Pro Arg Ala Leu Asn Tyr Tyr Glu Glu Val Val Asn  
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 Thr Ile Gln Glu Glu Thr Ala Lys Ser Arg Glu Gly Asn Cys Arg Leu  
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 Phe Gly Ile Pro Leu Thr Asn Asn Met Asn Gly Thr Asp Ser Thr Met  
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 Ser Gln Arg Asn Asn Leu Asn Asp Ala Ala Gly Leu Thr Gln Ile Ala  
           675                  680                  685  
 Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser Lys Gly Ser Lys Ser  
           690                  695                  700



684492SequenceListing.txt

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725 730 735

Lys Val His Lys Gln Gly Ile Ala Leu Gly Arg Ser Val Asp Leu Ser  
740 745 750

Lys Phe Gln Asn Tyr Glu Glu Leu Val Ala Glu Leu Asp Arg Leu Phe  
755 760 765

Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys Asp Trp Leu Ile Val  
770 775 780

Tyr Thr Asp Glu Glu Asn Asp Met Met Leu Val Gly Asp Asp Pro Trp  
785 790 795 800

Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe Ile Tyr Thr Lys Glu  
805 810 815

Glu Val Arg Lys Met Asn Pro Gly Thr Leu Ser Cys Arg Ser Glu Glu  
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684492SequenceListing.txt

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aacaagtagc agctgaaatt tgtattacta gcttatagta attaaactaa aaactacgtt  
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684492SequenceListing.txt

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1380

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## 684492SequenceListing.txt

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2340

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aaaaaatga gaaatgaaag tgaaaaagag atgagaactt tttttgggtc gcaggtagct  
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684492SequenceListing.txt

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acatttaatt tattttctcc cctaattgat ttttttggc aacttgagta tttatttttc  
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684492SequenceListing.txt

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6360

684492SequenceListing.txt

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7380



684492SequenceListing.txt

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## 684492SequenceListing.txt

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## 684492SequenceListing.txt

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840

tgcattcttg agtactggcc accgcatggc atgccatttc aacagggact atgtttacag  
900

tctactacaa acccaggacg agcccatctg agtttattgt tccgttcgat cagtatatgg  
960

agtctgttaa gaataactac tctattggca tgagattcaa aatgagattt gaaggcgaag  
1020

aggctcctga gcagaggttt actggcacia tcgttgggat tgaagagtct gatcctacta  
1080

ggtggccaaa atcaaagtgg agatccctca aggtgagatg ggatgagact tctagtattc  
1140

ctcgacctga tagagtatct ccgtggaaag tagagccagc tcttgctcct cctgctttga  
1200

gtcctgttcc aatgcctagg cctaagaggc ccagatcaaa tatagcacct tcattctctg  
1260

actcttcgat gcttaccaga gaaggatcaa ctaaggcaaa catggaccct ttaccagcaa  
1320

gcggactttc aagggctctg caaggatcaag aatactcgac cttaggagcg aaacatactg  
1380

agagtgtaga gtgtgatgct cctgagaatt ctgttgctctg gcaatcttca gcggatgatg  
1440

ataaggttga cgtggtttcg ggttctagaa gatatggatc tgagaactgg atgtcctcag  
1500

ccaggcatga acctacttac acagatttgc tctccggctt tgggactaac atagatccat  
1560

cccatggtca gcggatacct ttttatgacc attcatcatc accttctatg cctgcaaaga  
1620

684492SequenceListing.txt

gaatcttgag tgattcagaa ggcaagttcg attatcttgc taaccagtgg cagatgatac  
1680

actctggtct ctccctgaag ttacatgaat ctctaaggt acctgcagca actgatgcgt  
1740

ctctccaagg gcgatgcaat gttaaataca gcgaatatcc tgttcttaat ggtctatcga  
1800

ctgagaatgc tgggtggaac tggccaatac gtccacgtgc tttgaattat tatgaggaag  
1860

tggccaatgc tcaagcgcaa gctcaggcta gggagcaagt aacaaaacaa cccttcacga  
1920

tacaagagga gacagcaaag tcaagagaag ggaactgcag gctctttggc attcctctga  
1980

ccaacaacat gaatgggaca gactcaacca tgtctcagag aaacaacttg aatgatgctg  
2040

cggggccttac acagatagca tcaccaaagg ttcaggacct ttcagatcag tcaaaaggg  
2100

caaatcaac aaacgatcat cggaacagg gaagaccatt ccagactaat aatcctcatc  
2160

cgaaggatgc tcaaacgaaa accaactcaa gtaggagttg cacaaggtt cacaagcagg  
2220

gaattgcact tggccgttca gtggatcttt caaagttcca aaactatgag gagttagtgc  
2280

ctgagctgga caggctgttt gagtcaatg gagagttgat ggctcctaag aaagattggt  
2340

tgatagttaa cacagatgaa gagaatgata tgatgcttgt tggtgacgat ccttggcagg  
2400

agttttgttg catggttcgc aaaatcttca tatacacgaa agaggaagtg aggaagatga  
2460

acccggggac ttaagctgt aggagcgagg aagaagcagt tgttggggaa ggatcagatg  
2520

caaaggagcg caagtctgca tcaaatcctt cattgtccag cgctgggaac tcttaa  
2576

<210> 6  
<211> 166

684492SequenceListing.txt

<212> PRT

<213> Arabidopsis thaliana

<400> 6

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn  
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Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser  
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala  
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His  
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val  
65 70 75 80

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn  
85 90 95

Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu  
100 105 110

Leu Cys Arg Val Ile Asn Val Asp Leu Lys Arg Gln Ile Gln Met Lys  
115 120 125

Phe Met Arg Arg Leu Leu Phe Phe Leu Arg Leu Ile Lys Thr Arg Met  
130 135 140

Gln Leu Arg Lys Lys Arg Leu Phe Leu His Leu Arg Gly Ser Arg Cys  
145 150 155 160

Ile Arg Ser Ala Lys Pro  
165

<210> 7

<211> 19

<212> DNA

684492SequenceListing.txt

<213> Artificial Sequence

<220>

<223> engineered primer sequence

<400> 7

atggcgagtt cggaggttt

19

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> engineered primer sequence

<400> 8

tggacaatga aggatttgat g

21

<210> 9

<211> 2547

<212> DNA

<213> Brassica napus

<400> 9

atggcgagtt cggaggtttc tatgaaagga aatcgtggac gaggagaaaa cttctcctcc

60

gctggttaca gtgacccgac ggtcgccggc gaggcgaga aaactcagtc taaccgatct

120

gtggctgcag agcgcgttgt cgacccggaa gctgctctct accgtgagct gtggcacgct

180

tgtgtcggtc ctctcgtgac agtccctcga caagatgacc gagtcttcta cttccctcag

240

gggcacatcg agcagggtga agcatcgaca aatcaagctg cagaacagca gatgcctctc

300

tatgatcttc cttcgaagat ctttgtcgt gtcattaatg ttgatttaaa ggcagaggca

360

gacaccgacg aagtttatgc gcagattact cttcttcgg agcctgttca agacgagaat

420

tcaatagaga aagaggcgcc tcctcctccg cccccaaggt tccaagtga ctccttctgc

480

684492SequenceListing.txt

aaaaccttga ctgcatcgga cacaagtaca catggtggat tttctgtgct taggcggcat  
 540  
 gcggatgaat gtctcccacc tctggatatg tcacgtcaac ctctactca ggagttagtt  
 600  
 gcaaaagatc tgcattgcaag cgagtggcgt ttccgacata ttttccgagg tcaaccacga  
 660  
 aggcatttgc ttcagagtgg atggagcgtg tttgttagct ccaagaggct ggtcgcaggc  
 720  
 gatgctttta tatttctaag gggcgagaat ggagaattac gtgtgggtgt aaggcgtgca  
 780  
 atgcggcagc aaggaaatgt gccatcctct gttatatcaa gccacagcat gcattctcgga  
 840  
 gtattggcca ctgcctggca cgctatttca actggaacca tgtttacagt ctactataaa  
 900  
 ccgaggacta gtccttcaga gtttattggt ccgtttgatc agtatacgga gtccgtgaag  
 960  
 attaactact ccataggcat gagatttaaa atgagatttg aaggcgaaga ggctcccag  
 1020  
 cagaggttta ctggcacaat cgttgggatt gaagactctg accccacgag gtgggcaaaa  
 1080  
 tcaaaatgga gatccctcaa ggtacggtgg gatgagacca ctagtattcc tcgccctgat  
 1140  
 agagtatccc cgtggaagat agagccagct ctttctctc ctgctttgag cctgtacca  
 1200  
 atgcctaggc ctaagaggcc cagatctaatt ctgcttctt caactccgga ctcttccatg  
 1260  
 cgcataaggg aaggctcatc taaggcaaac atggaccctt taccggcaag tggactatca  
 1320  
 agggctcttc aaggtaaga ataccgcacc ttgagaacga aacatgttga gagggttaga  
 1380  
 tgcgatgctc ctgaaaattc ggttgtgtgg caatcgtcaa ctgatgatga caaggttgat  
 1440  
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## 684492SequenceListing.txt

tgcacggatt tgctttctgg ctttgggaca aacatagaac cacctcacgg tcatcagata  
1560

cctttttatg accgtttatc atcaccacct tctgtggctg caaggaaaat cctcagcgac  
1620

caggatggca agtttgaata tcttgctaac cagtggatga tgcactcagg cctttccctg  
1680

aagttacatg aatctcctaa agtccctgcc gcattctgatg cctctttcca agggataggc  
1740

aatcccaatt acggcgaata tgctttgcct cgtgcagtga cgactgagaa tgctgctggc  
1800

aactggccaa tacgtccacg tgctctaaat tattttgaag aagcggttca tgctcaggct  
1860

agagagcatg tgacaaaacg tcttgcggtc gtacaagagg aggcagcaaa gccaagagac  
1920

gggaactgca ggcttttttg cattcctctg gtgaacaacg tgaatgggac agatacaact  
1980

ttgtctcaga gaaacaattt gaatgaccct gcggggccta cgcagatggc atcaccaaag  
2040

gttcaggatc tttctgacca gtccaaaggg tcaaaatcga caaatgatca tcgtgagcaa  
2100

ggacgaccat tcccggttag taaaccccat ccgaaagacg ttcaaaccaa acaaaactca  
2160

tgtaggagct gcacgaaggt tcagaagcag gggattgcac ttggccggtc agtggatctc  
2220

tcaaagttcc agaactatga ggagttggtt actgaattgg ataggctggt tgagttcaat  
2280

ggagagttga tggctcctaa gaaagattgg ctgatagttt acacagatga tgagaatgat  
2340

atgatgcttg ttggagacga tccttggcag gaggtttgtt gcattggttcg taaaatcttc  
2400

atatacacga aagaggaggt caggaagatg aacccgggaa ctctatgctg taggaacgag  
2460

gaagaaccag ttgttgggga aggatcagat gcaaaggacg cgaagtctgc atcaaatcct  
2520

tcattgtcca gcgccggaaa ctcttaa



## 684492SequenceListing.txt

2547

<210> 10  
 <211> 848  
 <212> PRT  
 <213> Brassica napus

<400> 10

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Arg Gly Glu  
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 20 25 30  
 Gln Lys Thr Gln Ser Asn Arg Ser Val Ala Ala Glu Arg Val Val Asp  
 35 40 45  
 Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His Ala Cys Ala Gly Pro  
 50 55 60  
 Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val Phe Tyr Phe Pro Gln  
 65 70 75 80  
 Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn Gln Ala Ala Glu Gln  
 85 90 95  
 Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Ile Leu Cys Arg Val Ile  
 100 105 110  
 Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp Glu Val Tyr Ala Gln  
 115 120 125  
 Ile Thr Leu Leu Pro Glu Pro Val Gln Asp Glu Asn Ser Ile Glu Lys  
 130 135 140  
 Glu Ala Pro Pro Pro Pro Pro Pro Arg Phe Gln Val His Ser Phe Cys  
 145 150 155 160  
 Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val  
 165 170 175

684492SequenceListing.txt

Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Arg  
 180 185 190  
 Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ala Ser Glu  
 195 200 205  
 Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu  
 210 215 220  
 Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly  
 225 230 235 240  
 Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly  
 245 250 255  
 Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val Pro Ser Ser Val Ile  
 260 265 270  
 Ser Ser His Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His Ala  
 275 280 285  
 Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr Ser  
 290 295 300  
 Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr Thr Glu Ser Val Lys  
 305 310 315 320  
 Ile Asn Tyr Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu  
 325 330 335  
 Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Glu Asp  
 340 345 350  
 Ser Asp Pro Thr Arg Trp Ala Lys Ser Lys Trp Arg Ser Leu Lys Val  
 355 360 365  
 Arg Trp Asp Glu Thr Thr Ser Ile Pro Arg Pro Asp Arg Val Ser Pro  
 370 375 380

## 684492SequenceListing.txt

Trp Lys Ile Glu Pro Ala Leu Ser Pro Pro Ala Leu Ser Pro Val Pro  
385 390 395 400

Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Leu Ala Ser Ser Thr Pro  
405 410 415

Asp Ser Ser Met Arg Ile Arg Glu Gly Ser Ser Lys Ala Asn Met Asp  
420 425 430

Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu Gln Gly Gln Glu Tyr  
435 440 445

Pro Thr Leu Arg Thr Lys His Val Glu Ser Val Glu Cys Asp Ala Pro  
450 455 460

Glu Asn Ser Val Val Trp Gln Ser Ser Thr Asp Asp Asp Lys Val Asp  
465 470 475 480

Val Ile Ser Ala Ser Arg Arg Tyr Glu Asn Trp Ile Ser Ser Gly Arg  
485 490 495

His Gly Pro Thr Cys Thr Asp Leu Leu Ser Gly Phe Gly Thr Asn Ile  
500 505 510

Glu Pro Pro His Gly His Gln Ile Pro Phe Tyr Asp Arg Leu Ser Ser  
515 520 525

Pro Pro Ser Val Ala Ala Arg Lys Ile Leu Ser Asp Gln Asp Gly Lys  
530 535 540

Phe Glu Tyr Leu Ala Asn Gln Trp Met Met His Ser Gly Leu Ser Leu  
545 550 555 560

Lys Leu His Glu Ser Pro Lys Val Pro Ala Ala Ser Asp Ala Ser Phe  
565 570 575

Gln Gly Ile Gly Asn Pro Asn Tyr Gly Glu Tyr Ala Leu Pro Arg Ala  
580 585 590

684492SequenceListing.txt

Val Thr Thr Glu Asn Ala Ala Gly Asn Trp Pro Ile Arg Pro Arg Ala  
 595 600 605  
 Leu Asn Tyr Phe Glu Glu Ala Val His Ala Gln Ala Arg Glu His Val  
 610 615 620  
 Thr Lys Arg Pro Ala Val Val Gln Glu Glu Ala Ala Lys Pro Arg Asp  
 625 630 635 640  
 Gly Asn Cys Arg Leu Phe Gly Ile Pro Leu Val Asn Asn Val Asn Gly  
 645 650 655  
 Thr Asp Thr Thr Leu Ser Gln Arg Asn Asn Leu Asn Asp Pro Ala Gly  
 660 665 670  
 Pro Thr Gln Met Ala Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser  
 675 680 685  
 Lys Gly Ser Lys Ser Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe  
 690 695 700  
 Pro Val Ser Lys Pro His Pro Lys Asp Val Gln Thr Lys Thr Asn Ser  
 705 710 715 720  
 Cys Arg Ser Cys Thr Lys Val Gln Lys Gln Gly Ile Ala Leu Gly Arg  
 725 730 735  
 Ser Val Asp Leu Ser Lys Phe Gln Asn Tyr Glu Glu Leu Val Thr Glu  
 740 745 750  
 Leu Asp Arg Leu Phe Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys  
 755 760 765  
 Asp Trp Leu Ile Val Tyr Thr Asp Asp Glu Asn Asp Met Met Leu Val  
 770 775 780  
 Gly Asp Asp Pro Trp Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe  
 785 790 795 800

684492SequenceListing.txt

Ile Tyr Thr Lys Glu Glu Val Arg Lys Met Asn Pro Gly Thr Leu Cys  
805 810 815

Cys Arg Asn Glu Glu Glu Pro Val Val Gly Glu Gly Ser Asp Ala Lys  
820 825 830

Asp Ala Lys Ser Ala Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser  
835 840 845

<210> 11  
<211> 30  
<212> DNA  
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<220>  
<223> engineered primer sequence

<400> 11  
aaacatatgc caacgggatac atgggattac  
30

<210> 12  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> engineered primer sequence

<400> 12  
aaactgcagc gttcccggag atacgaaaac  
30

<210> 13  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> engineered primer sequence

<400> 13  
aaacatatgg gaattcacaac tcggaagtc  
30

684492SequenceListing.txt

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<210> 14
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<220>
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<400> 14
aaactgcagg gtccgtttat tagttcctc
29

<210> 15
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
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<400> 15
gatctagagg cgcgccggat ctgagaactg gatg
34

<210> 16
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 16
gaggatccat ttaaattccgc agcatcattc aagt
34

<210> 17
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
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<400> 17
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35

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# 684492SequenceListing.txt

<210> 18  
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 <400> 18  
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 34

<210> 19  
 <211> 27  
 <212> DNA  
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 <223> engineered primer sequence  
 <400> 19  
 gaattcccaa cgggatcatg ggattac  
 27

<210> 20  
 <211> 27  
 <212> DNA  
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 <223> engineered primer sequence  
 <400> 20  
 ccatggcggtt cccggagata cgaaaac  
 27

<210> 21  
 <211> 24  
 <212> DNA  
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 <223> engineered primer sequence  
 <400> 21  
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 24

# 684492SequenceListing.txt

<210> 22  
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 <223> engineered primer sequence  
  
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 26

<210> 23  
 <211> 21  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence  
  
 <400> 23  
 ctcgaggaag gtatggcgag t  
 21

<210> 24  
 <211> 21  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence  
  
 <400> 24  
 ggatcctcca gtctccacca a  
 21

<210> 25  
 <211> 26  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence  
  
 <400> 25  
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 26



684492SequenceListing.txt

<210> 26  
 <211> 26  
 <212> DNA  
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 <223> engineered primer sequence

<400> 26  
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 26

<210> 27  
 <211> 26  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence

<400> 27  
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 26

<210> 28  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> engineered primer sequence

<400> 28  
 ctgcaggaga gtgtgtgtgt acgatg  
 26

<210> 29  
 <211> 30  
 <212> DNA  
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<400> 29  
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 30

# 684492SequenceListing.txt

<210> 30  
 <211> 26  
 <212> DNA  
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<400> 30  
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 26

<210> 31  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
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<400> 31  
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 26

<210> 32  
 <211> 26  
 <212> DNA  
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 <223> engineered primer sequence

<400> 32  
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 26

<210> 33  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
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 <223> engineered primer sequence

<400> 33  
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684492SequenceListing.txt

<210> 34  
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 <400> 34  
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 30

<210> 35  
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 <223> engineered primer sequence  
  
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<210> 36  
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 aaaggatccc taattttgca ccaaatgccg  
 30

<210> 37  
 <211> 26  
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 <220>  
 <223> engineered primer sequence  
  
 <400> 37  
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 26

# 684492SequenceListing.txt

<210> 38  
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<400> 38  
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 26

<210> 39  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> engineered primer sequence

<400> 39  
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 26

<210> 40  
 <211> 26  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence

<400> 40  
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 26

<210> 41  
 <211> 27  
 <212> DNA  
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<400> 41  
 aaacatatgg atacacaagt tctttgg  
 27

# 684492SequenceListing.txt

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 29

<210> 43  
 <211> 30  
 <212> DNA  
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 <220>  
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 30

<210> 44  
 <211> 30  
 <212> DNA  
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 <223> engineered primer sequence  
  
 <400> 44  
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 30

<210> 45  
 <211> 29  
 <212> DNA  
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 <223> engineered primer sequence  
  
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 29

# 684492SequenceListing.txt

<210> 46  
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 <212> DNA  
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 28

<210> 47  
 <211> 22  
 <212> DNA  
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 <220>  
 <223> engineered primer sequence  
  
 <400> 47  
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 22

<210> 48  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> engineered primer sequence  
  
 <400> 48  
 gagtgggtgg agtgtgtttg  
 20

<210> 49  
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 <213> Artificial Sequence  
  
 <220>  
 <223> engineered primer sequence  
  
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# 684492SequenceListing.txt

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<220>  
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 21

<210> 51  
 <211> 20  
 <212> DNA  
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<220>  
 <223> engineered primer sequence

<400> 51  
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 20

<210> 52  
 <211> 21  
 <212> DNA  
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<220>  
 <223> engineered primer sequence

<400> 52  
 agttggtttt cgtttgagca t  
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<210> 53  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> engineered primer sequence

<400> 53  
 cacttgaagg gtggtgcca g  
 21

684492SequenceListing.txt

<210> 54  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> engineered primer sequence

<400> 54  
 cctgttgctg ccaacgaagt c  
 21

<210> 55  
 <211> 2580  
 <212> DNA  
 <213> Arabidopsis thaliana

<400> 55  
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 60

ggtttttagtg accctaagga gactagaaat gtctccgtcg ccggcgaggg gcaaaaaagt  
 120

aattctaccc gatccgctgc ggctgagcgt gctttggacc ctgaggctgc tctttacaga  
 180

gagctatggc acgcttgctc tgggtccgctt gtgacgggtc ctagacaaga cgaccgagtc  
 240

ttctattttc ctcaaggaca catcgagcag gtggaggctt cgacgaacca ggcggcagaa  
 300

caacagatgc ctctctatga tcttccgtca aagcttctct gtcgagttat taatgtagat  
 360

ttaaaggcag aggcagatac agatgaagtt tatgcgcaga ttactcttct tcctgaggct  
 420

aatcaagacg agaatgcaat tgagaaagaa gcgcctcttc ctccacctcc gaggttcag  
 480

gtgcattcgt tctgcaaaac cttgactgca tccgacacaa gtacacatgg tggattttct  
 540

gttcttaggc gacatgcgga tgaatgtctc ccacctctgg atatgtctcg acagcctccc  
 600

actcaagagt tagttgcaaa ggatttgcac gcaaatgagt ggcgattcag acatatattc  
 660



684492SequenceListing.txt

cggggtcaac cacggaggca ttgtctacag agtgggtgga gtgtgtttgt tagctccaaa  
 720  
 aggctagttag caggcgatgc gtttatattt ctaaggggagc agaattggaga attaagagtt  
 780  
 ggtgtaaggc gtgcatgagc acaacaagga aacgtgccgt cttctgttat atctagccat  
 840  
 agcatgcatc ttggagtact ggccaccgca tggcatgccca tttcaacagg gactatgttt  
 900  
 acagtctact acaaaccagc gacgagccca tctgagttaa ttgttccgtt cgatcagtat  
 960  
 atggagtctg ttaagaataa ctactctatt ggcatgagat tcaaaatgag atttgaaggc  
 1020  
 gaagaggctc ctgagcagag gtttactggc acaatcgttg ggattgaaga gtctgatcct  
 1080  
 actaggtggc caaaatcaaa gtggagatcc ctcaaggatga gatgggatga gacttctagt  
 1140  
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 1200  
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 1260  
 cctgactctt cgatgcttac cagagaaggt acaactaagg caaacatgga ccctttacca  
 1320  
 gcaagcggac tttcaagggt ctgcaaggc caagaatact cgacctgag gacgaaacat  
 1380  
 actgagagtg tagagtgtga tgctcctgag aattctgttg tctggcaatc ttcagcggat  
 1440  
 gatgataagg ttgacgtggt ttcgggttct agaagatatg gatctgagaa ctggatgtcc  
 1500  
 tcagccaggc atgaacctac ttacacagat ttgctctccg gctttgggac taacatagat  
 1560  
 ccattccatg gtcagcggat acctttttat gaccattcat catcaccttc tatgcctgca  
 1620  
 aagagaatct tgagtgattc agaaggcaag ttcgattatc ttgctaacca gtggcagatg  
 1680

684492SequenceListing.txt

atacactctg gtctctccct gaagttacat gaatctccta aggtacctgc agcaactgat  
1740

gcgtctctcc aagggcgatg caatgttaaa tacagcgaat atcctgttct taatggctca  
1800

tcgactgaga atgctggtgg taactggcca atacgtccac gtgctttgaa ttattatgag  
1860

gaagtgggtca atgctcaagc gcaagctcag gctagggagc aagtaacaaa acaacccttc  
1920

acgatacaag aggagacagc aaagtcaaga gaagggaaact gcaggctctt tggcattcct  
1980

ctgaccaaca acatgaatgg gacagactca accatgtctc agagaacaaa cttgaatgat  
2040

gtgcgggggc ttacacagat agcatcacca aaggttcagg acctttcaga tcagtcaaaa  
2100

gggtcaaaat caacaaacga tcatcgtgaa cagggaagac cattccagac taataatcct  
2160

catccgaagg atgctcaaac gaaaaccaac tcaagtagga gttgcacaaa gggtcacaa  
2220

cagggaattg cacttggccg ttcagtggat ctttcaaagt tccaaaacta tgaggagtta  
2280

gtcgtgagc tggacaggct gtttgagttc aatggagagt tgatggctcc taagaaagat  
2340

tggttgatag ttacacaga tgaagagaat gatatgatgc ttgttggtga cgatccttgg  
2400

caggagtttt gttgcatggt tcgcaaaatc ttcataata cgaagagga agtgaggaag  
2460

atgaacccgg ggactttaag ctgtaggagc gaggaagaag cagttgttgg ggaaggatca  
2520

gatgcaaagg acgccaagtc tgcatcaaat ctttcattgt ccagcgctgg gaactcttaa  
2580

<210> 56  
<211> 2576  
<212> DNA  
<213> Arabidopsis thaliana

<400> 56

## 684492SequenceListing.txt

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ggttttagtg accctaagga gactagaaat gtctccgtcg ccggcgaggg gcaaaaaagt  
120

aattctaccc gatccgctgc ggctgagcgt gctttggacc ctgaggctgc tctttacaga  
180

gagctatggc acgcttgctg tggtcgcgtt gtgacggttc ctagacaaga cgaccgagtc  
240

ttctattttc ctcaaggaca catcgagcag gtggaggctt cgacgaacca ggcggcagaa  
300

caacagatgc ctctctatga tcttccgtca aagcttctct gtcgagttat taatgtagat  
360

ttaaagaggc agatacagat gaagtttatg cgcagattac tcttcttctt gaggctaact  
420

aagacgagaa tgcaattgag aaagaagcgc ctcttctctc acctccgagg ttccaggctg  
480

attcgttctg caaaaccttg actgcatccg acacaagtac acatggtgga ttttctgttc  
540

ttaggcgaca tgcggatgaa tgtctccac ctctggatat gtctcgacag cctccactc  
600

aagagttagt tgcaaaggat ttgcatgcaa atgagtggcg attcagacat atattccggg  
660

gtcaaccacg gaggcatttg ctacagagtg ggtggagtg gtttgtagc tccaaaaggc  
720

tagttgcagg cgatgcgttt atatttctaa ggggcgagaa tggagaatta agagttggtg  
780

taaggcgtgc gatgagcaaa caaggaaacg tgccgtcttc tggtatatct agccatagca  
840

tgcattcttg agtactggcc accgcatggc atgccatttc aacagggact atgtttacag  
900

tctactacaa acccaggacg agcccatctg agtttattgt tccgttcgat cagtatatgg  
960

agtctgttaa gaataactac tctattggca tgagattcaa aatgagattt gaaggcgaag  
1020

aggctcctga gcagaggttt actggcacaa tcgttgggat tgaagagtct gatcctacta  
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## 684492SequenceListing.txt

1080

ggtggccaaa atcaaagtgg agatccctca aggtgagatg ggatgagact tctagtattc  
1140

ctcgacctga tagagtatct ccgtggaaag tagagccagc tcttgctcct cctgctttga  
1200

gtcctgttcc aatgcctagg cctaagaggc ccagatcaaa tatagcacct tcattctctg  
1260

actcttcgat gcttaccaga gaaggtacaa ctaaggcaaa catggaccct ttaccagcaa  
1320

gcggactttc aagggtcttg caaggtcaag aatactcgac cttagggacg aacatactg  
1380

agagtgtaga gtgtgatgct cctgagaatt ctgttgctg gcaatcttca gcggatgatg  
1440

ataaggttga cgtggtttcg ggttctagaa gatatggatc tgagaactgg atgtcctcag  
1500

ccaggcatga acctacttac acagatttgc tctccggctt tgggactaac atagatccat  
1560

cccatggtca gcggatacct ttttatgacc attcatcatc accttctatg cctgcaaaaga  
1620

gaatcttgag tgattcagaa ggcaagttcg attatcttgc taaccagtgg cagatgatac  
1680

actctggtct ctccctgaag ttacatgaat ctcttaaggt acctgcagca actgatgcgt  
1740

ctctccaagg gcgatgcaat gttaaataca gcgaatatcc tgttcttaat ggtctatcga  
1800

ctgagaatgc tgggtgtaac tggccaatac gtccacgtgc tttgaattat tatgaggaag  
1860

tggatcaatgc tcaagcgcaa gctcaggcta gggagcaagt aacaaaacaa cccttcacga  
1920

tacaagagga gacagcaaag tcaagagaag ggaactgcag gctctttggc attcctctga  
1980

ccaacaacat gaatgggaca gactcaacca tgtctcagag aaacaacttg aatgatgctg  
2040

cggggcttac acagatagca tcaccaaagg ttcaggacct ttcagatcag tcaaaagggt  
2100

684492SequenceListing.txt

caaaatcaac aaacgatcat cgtgaacagg gaagaccatt ccagactaat aatcctcatc  
2160

cgaaggatgc tcaaacgaaa accaactcaa gtaggagttg cacaaagggt cacaagcagg  
2220

gaattgcact tggccgttca gtggatcttt caaagttcca aaactatgag gagttagtcg  
2280

ctgagctgga caggctgttt gaggccaatg gagagttgat ggctcctaag aaagattggg  
2340

tgatagttta cacagatgaa gagaatgata tgatgcttgt tggtgacgat ccttggcagg  
2400

agttttgttg catggttcgc aaaatcttca tatacacgaa agaggaagtg aggaagatga  
2460

acccggggac tttaagctgt aggagcgagg aagaagcagt tgttggggaa ggatcagatg  
2520

caaaggacgc caagtctgca tcaaatcctt cattgtccag cgctgggaac tcttaa  
2576

<210> 57  
<211> 859  
<212> PRT  
<213> Arabidopsis thaliana

<400> 57

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn  
1 5 10 15

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser  
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala  
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His  
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val  
65 70 75 80

## 684492SequenceListing.txt

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn  
                   85                  90                  95  
 Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu  
                   100                  105                  110  
 Leu Cys Arg Val Ile Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp  
                   115                  120                  125  
 Glu Val Tyr Ala Gln Ile Thr Leu Leu Pro Glu Ala Asn Gln Asp Glu  
                   130                  135                  140  
 Asn Ala Ile Glu Lys Glu Ala Pro Leu Pro Pro Pro Arg Phe Gln  
                   145                  150                  155                  160  
 Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His  
                   165                  170                  175  
 Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro  
                   180                  185                  190  
 Leu Asp Met Ser Arg Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp  
                   195                  200                  205  
 Leu His Ala Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro  
                   210                  215                  220  
 Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys  
                   225                  230                  235                  240  
 Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly  
                   245                  250                  255  
 Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val  
                   260                  265                  270  
 Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu Ala  
                   275                  280                  285

## 684492SequenceListing.txt

Thr Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr  
 290 295 300  
 Lys Pro Arg Thr Ser Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr  
 305 310 315 320  
 Met Glu Ser Val Lys Asn Asn Tyr Ser Ile Gly Met Arg Phe Lys Met  
 325 330 335  
 Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile  
 340 345  
 Val Gly Ile Glu Glu Ser Asp Pro Thr Arg Trp Pro Lys Ser Lys Trp  
 355 360 365  
 Arg Ser Leu Lys Val Arg Trp Asp Glu Thr Ser Ser Ile Pro Arg Pro  
 370 375 380  
 Asp Arg Val Ser Pro Trp Lys Val Glu Pro Ala Leu Ala Pro Pro Ala  
 385 390 395 400  
 Leu Ser Pro Val Pro Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Ile  
 405 410 415  
 Ala Pro Ser Ser Pro Asp Ser Ser Met Leu Thr Arg Glu Gly Thr Thr  
 420 425 430  
 Lys Ala Asn Met Asp Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu  
 435 440 445  
 Gln Gly Gln Glu Tyr Ser Thr Leu Arg Thr Lys His Thr Glu Ser Val  
 450 455 460  
 Glu Cys Asp Ala Pro Glu Asn Ser Val Val Trp Gln Ser Ser Ala Asp  
 465 470 475 480  
 Asp Asp Lys Val Asp Val Val Ser Gly Ser Arg Arg Tyr Gly Ser Glu  
 485 490 495

684492SequenceListing.txt

Asn Trp Met Ser Ser Ala Arg His Glu Pro Thr Tyr Thr Asp Leu Leu  
           500                          505                          510  
 Ser Gly Phe Gly Thr Asn Ile Asp Pro Ser His Gly Gln Arg Ile Pro  
           515                          520                          525  
 Phe Tyr Asp His Ser Ser Ser Pro Ser Met Pro Ala Lys Arg Ile Leu  
           530                          535                          540  
 Ser Asp Ser Glu Gly Lys Phe Asp Tyr Leu Ala Asn Gln Trp Gln Met  
           545                          550                          555                          560  
 Ile His Ser Gly Leu Ser Leu Lys Leu His Glu Ser Pro Lys Val Pro  
                           565                          570                          575  
 Ala Ala Thr Asp Ala Ser Leu Gln Gly Arg Cys Asn Val Lys Tyr Ser  
                           580                          585                          590  
 Glu Tyr Pro Val Leu Asn Gly Leu Ser Thr Glu Asn Ala Gly Gly Asn  
                           595                          600                          605  
 Trp Pro Ile Arg Pro Arg Ala Leu Asn Tyr Tyr Glu Glu Val Val Asn  
           610                          615                          620  
 Ala Gln Ala Gln Ala Gln Ala Arg Glu Gln Val Thr Lys Gln Pro Phe  
           625                          630                          635                          640  
 Thr Ile Gln Glu Glu Thr Ala Lys Ser Arg Glu Gly Asn Cys Arg Leu  
                           645                          650                          655  
 Phe Gly Ile Pro Leu Thr Asn Asn Met Asn Gly Thr Asp Ser Thr Met  
                           660                          665                          670  
 Ser Gln Arg Asn Asn Leu Asn Asp Ala Ala Gly Leu Thr Gln Ile Ala  
           675                          680                          685  
 Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser Lys Gly Ser Lys Ser  
           690                          695                          700



684492SequenceListing.txt

Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe Gln Thr Asn Asn Pro  
705 710 715 720

His Pro Lys Asp Ala Gln Thr Lys Thr Asn Ser Ser Arg Ser Cys Thr  
725 730 735

Lys Val His Lys Gln Gly Ile Ala Leu Gly Arg Ser Val Asp Leu Ser  
740 745 750

Lys Phe Gln Asn Tyr Glu Glu Leu Val Ala Glu Leu Asp Arg Leu Phe  
755 760 765

Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys Asp Trp Leu Ile Val  
770 775 780

Tyr Thr Asp Glu Glu Asn Asp Met Met Leu Val Gly Asp Asp Pro Trp  
785 790 795 800

Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe Ile Tyr Thr Lys Glu  
805 810 815

Glu Val Arg Lys Met Asn Pro Gly Thr Leu Ser Cys Arg Ser Glu Glu  
820 825 830

Glu Ala Val Val Gly Glu Gly Ser Asp Ala Lys Asp Ala Lys Ser Ala  
835 840 845

Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser  
850 855

<210> 58  
<211> 166  
<212> PRT  
<213> Arabidopsis thaliana

<400> 58

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn  
1 5 10 15

684492SequenceListing.txt

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser  
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala  
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His  
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val  
65 70 75 80

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn  
85 90 95

Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu  
100 105 110

Leu Cys Arg Val Ile Asn Val Asp Leu Lys Arg Gln Ile Gln Met Lys  
115 120 125

Phe Met Arg Arg Leu Leu Phe Phe Leu Arg Leu Ile Lys Thr Arg Met  
130 135 140

Gln Leu Arg Lys Lys Arg Leu Phe Leu His Leu Arg Gly Ser Arg Cys  
145 150 155 160

Ile Arg Ser Ala Lys Pro  
165

<210> 59

<211> 2547

<212> DNA

<213> Brassica napus

<400> 59

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60

gctggttaca gtgacccgac ggtcgccggc gaggcgcaga aaactcagtc taaccgatct  
120

## 684492SequenceListing.txt

gtggctgcag agcgcgttgt cgacccggaa gctgctctct accgtgagct gtggcacgct  
180

tgtgctggtc ctctcgtgac agtcctcga caagatgacc gagtcttcta ctccctcag  
240

gggcacatcg agcaggtgga agcatcgaca aatcaagctg cagaacagca gatgcctctc  
300

tatgatcttc cttcgaagat ctttgtcgt gtcattaatg ttgatttaaa ggcagaggca  
360

gacaccgacg aagtttatgc gcagattact cttcttcgg agcctgttca agacgagaat  
420

tcaatagaga aagaggcgcc tcctcctccg cccccaaggt tccaagtga ctccttctgc  
480

aaaaccttga ctgcatcgga cacaagtaca catggtggat tttctgtgct tagggcgcat  
540

gcggtgaat gtctcccacc tctggatatg tcacgtcaac ctcctactca ggagttagtt  
600

gcaaaagatc tgcattgaag cgagtggcgt ttccgacata ttttcgagg tcaaccacga  
660

aggcatttgc ttcagagtgg atggagcgtg tttgttagct ccaagaggct ggtcgaggc  
720

gatgctttta tatttctaag gggcgagaat ggagaattac gtgtgggtgt aaggcgtgca  
780

atgcggcagc aaggaaatgt gccatcctct gttatatcaa gccacagcat gcattctgga  
840

gtattggcca ctgcctggca cgctatttca actggaacca tgtttacagt ctactataaa  
900

ccgaggacta gtccttcaga gtttattgtt ccgtttgatc agtatacgga gtcctggaag  
960

attaactact ccataggcat gagatttaaa atgagatttg aaggcgaaga ggctcccgag  
1020

cagaggttta ctggcacaat cgttgggatt gaagactctg accccacgag gtgggcaaaa  
1080

tcaaaatgga gatccctcaa ggtacggtgg gatgagacca ctagtattcc tcgccctgat  
1140

agagtatccc cgtggaagat agagccagct ctttctctc ctgctttgag ccctgtacca  
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684492SequenceListing.txt

1200

atgcctaggc ctaagaggcc cagatctaata tagcttctt caactccgga ctcttccatg  
1260

cgcataaggg aaggctcatc taaggcaaac atggaccctt taccggcaag tggactatca  
1320

agggctcttg aaggtaaga atacccgacc ttgagaacga aacatgttga gagtgtagaa  
1380

tgcgatgctc ctgaaaattc ggttggtggt caatcgtaa ctgatgatga caagggtgat  
1440

gtgatttcag cttctaggag atatgagaac tggatatcct caggtaggca tggacctact  
1500

tgcacggatt tgctttctgg ctttgggaca aacatagaac cacctcacgg tcatacagata  
1560

cctttttatg accgtttatc atcaccacct tctgtggctg caaggaaaat cctcagcgac  
1620

caggatggca agtttgaata tcttgctaac cagtggatga tgcactcagg cttttccctg  
1680

aagttacatg aatctcctaa agtccttgcc gcatctgatg cctctttcca agggataggc  
1740

aatcccaatt acggcgaata tgctttgcct cgtgcagtga cgactgagaa tgctgctggc  
1800

aactggccaa tacgtccacg tgctctaaat tattttgaag aagcggttca tgctcaggct  
1860

agagagcatg tgacaaaacg tcctgcggtc gtacaagagg aggcagcaaa gccaagagac  
1920

gggaactgca ggcttttttg cattcctctg gtgaacaacg tgaatgggac agatacaact  
1980

ttgtctcaga gaaacaattt gaatgacct gcggggccta cgcagatggc atcaccaaag  
2040

gttcaggatc tttctgacca gtccaaaggg tcaaaatcga caaatgatca tcgtgagcaa  
2100

ggacgaccat tcccggttag taaaccccat ccgaaagacg ttcaaacc aaacaaactca  
2160

tgtaggagct gcacgaaggt tcagaagcag gggattgcac ttggccggtc agtggatctc  
2220

684492SequenceListing.txt

tcaaagttcc agaactatga ggagttgggt actgaattgg ataggctggt tgagttcaat  
2280

ggagagttga tggctcctaa gaaagattgg ctgatatgtt acacagatga tgagaatgat  
2340

atgatgcttg ttggagacga tccttggcag gagttttgtt gcatgggttcg taaaatcttc  
2400

atatacacga aagaggaggt caggaagatg aaccgggaa ctctatgctg taggaacgag  
2460

gaagaaccag ttgttgggga aggatcagat gcaaaggacg cgaagtctgc atcaaattct  
2520

tcattgtcca gcgccgaaa ctcttaa  
2547

<210> 60

<211> 848

<212> PRT

<213> Brassica napus

<400> 60

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Arg Gly Glu  
1 5 10 15

Asn Phe Ser Ser Ala Gly Tyr Ser Asp Pro Thr Val Ala Gly Glu Ala  
20 25 30

Gln Lys Thr Gln Ser Asn Arg Ser Val Ala Ala Glu Arg Val Val Asp  
35 40 45

Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His Ala Cys Ala Gly Pro  
50 55 60

Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val Phe Tyr Phe Pro Gln  
65 70 75 80

Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn Gln Ala Ala Glu Gln  
85 90 95

Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Ile Leu Cys Arg Val Ile  
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## 684492SequenceListing.txt

100

105

110

Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp Glu Val Tyr Ala Gln  
 115 120 125

Ile Thr Leu Leu Pro Glu Pro Val Gln Asp Glu Asn Ser Ile Glu Lys  
 130 135 140

Glu Ala Pro Pro Pro Pro Pro Arg Phe Gln Val His Ser Phe Cys  
 145 150 155 160

Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val  
 165 170 175

Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Arg  
 180 185 190

Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ala Ser Glu  
 195 200 205

Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu  
 210 215 220

Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly  
 225 230 235 240

Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly  
 245 250 255

Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val Pro Ser Ser Val Ile  
 260 265 270

Ser Ser His Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His Ala  
 275 280 285

Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr Ser  
 290 295 300

Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr Thr Glu Ser Val Lys  
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## 684492SequenceListing.txt

305

310

315

320

Ile Asn Tyr Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu  
 325 330 335

Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Glu Asp  
 340 345 350

Ser Asp Pro Thr Arg Trp Ala Lys Ser Lys Trp Arg Ser Leu Lys Val  
 355 360 365

Arg Trp Asp Glu Thr Thr Ser Ile Pro Arg Pro Asp Arg Val Ser Pro  
 370 375 380

Trp Lys Ile Glu Pro Ala Leu Ser Pro Pro Ala Leu Ser Pro Val Pro  
 385 390 395 400

Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Leu Ala Ser Ser Thr Pro  
 405 410 415

Asp Ser Ser Met Arg Ile Arg Glu Gly Ser Ser Lys Ala Asn Met Asp  
 420 425 430

Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu Gln Gly Gln Glu Tyr  
 435 440 445

Pro Thr Leu Arg Thr Lys His Val Glu Ser Val Glu Cys Asp Ala Pro  
 450 455 460

Glu Asn Ser Val Val Trp Gln Ser Ser Thr Asp Asp Asp Lys Val Asp  
 465 470 475 480

Val Ile Ser Ala Ser Arg Arg Tyr Glu Asn Trp Ile Ser Ser Gly Arg  
 485 490 495

His Gly Pro Thr Cys Thr Asp Leu Leu Ser Gly Phe Gly Thr Asn Ile  
 500 505 510

Glu Pro Pro His Gly His Gln Ile Pro Phe Tyr Asp Arg Leu Ser Ser  
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## 684492SequenceListing.txt

515

520

525

Pro Pro Ser Val Ala Ala Arg Lys Ile Leu Ser Asp Gln Asp Gly Lys  
 530 535 540  
 Phe Glu Tyr Leu Ala Asn Gln Trp Met Met His Ser Gly Leu Ser Leu  
 545 550 555 560  
 Lys Leu His Glu Ser Pro Lys Val Pro Ala Ala Ser Asp Ala Ser Phe  
 565 570 575  
 Gln Gly Ile Gly Asn Pro Asn Tyr Gly Glu Tyr Ala Leu Pro Arg Ala  
 580 585 590  
 Val Thr Thr Glu Asn Ala Ala Gly Asn Trp Pro Ile Arg Pro Arg Ala  
 595 600 605  
 Leu Asn Tyr Phe Glu Glu Ala Val His Ala Gln Ala Arg Glu His Val  
 610 615 620  
 Thr Lys Arg Pro Ala Val Val Gln Glu Glu Ala Ala Lys Pro Arg Asp  
 625 630 635 640  
 Gly Asn Cys Arg Leu Phe Gly Ile Pro Leu Val Asn Asn Val Asn Gly  
 645 650 655  
 Thr Asp Thr Thr Leu Ser Gln Arg Asn Asn Leu Asn Asp Pro Ala Gly  
 660 665 670  
 Pro Thr Gln Met Ala Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser  
 675 680 685  
 Lys Gly Ser Lys Ser Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe  
 690 695 700  
 Pro Val Ser Lys Pro His Pro Lys Asp Val Gln Thr Lys Thr Asn Ser  
 705 710 715 720  
 Cys Arg Ser Cys Thr Lys Val Gln Lys Gln Gly Ile Ala Leu Gly Arg  
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## 684492SequenceListing.txt

725

730

735

Ser Val Asp Leu Ser Lys Phe Gln Asn Tyr Glu Glu Leu Val Thr Glu  
740 745 750

Leu Asp Arg Leu Phe Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys  
755 760 765

Asp Trp Leu Ile Val Tyr Thr Asp Asp Glu Asn Asp Met Met Leu Val  
770 775 780

Gly Asp Asp Pro Trp Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe  
785 790 795 800

Ile Tyr Thr Lys Glu Glu Val Arg Lys Met Asn Pro Gly Thr Leu Cys  
805 810 815

Cys Arg Asn Glu Glu Glu Pro Val Val Gly Glu Gly Ser Asp Ala Lys  
820 825 830

Asp Ala Lys Ser Ala Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser  
835 840 845

<210> 61

<211> 791

<212> PRT

<213> Oryza sativa

<400> 61

Gly Asp Pro Leu Tyr Asp Glu Leu Trp His Ala Cys Ala Gly Pro Leu  
1 5 10 15

Val Thr Val Pro Arg Val Gly Asp Leu Val Phe Tyr Phe Pro Gln Gly  
20 25 30

His Ile Glu Gln Val Glu Ala Ser Met Asn Gln Val Ala Asp Ser Gln  
35 40 45

Met Arg Leu Tyr Asp Leu Pro Ser Lys Leu Leu Cys Arg Val Leu Asn  
50 55 60

## 684492SequenceListing.txt

Val Glu Leu Lys Ala Glu Gln Asp Thr Asp Glu Val Tyr Ala Gln Val  
 65 70 75 80  
 Met Leu Met Pro Glu Pro Glu Gln Asn Glu Met Ala Val Glu Lys Thr  
 85 90 95  
 Thr Pro Thr Ser Gly Pro Val Gln Ala Arg Pro Pro Val Arg Ser Phe  
 100 105 110  
 Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser  
 115 120 125  
 Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Thr  
 130 135 140  
 Gln Ser Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ser Met  
 145 150 155 160  
 Asp Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu  
 165 170 175  
 Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala  
 180 185 190  
 Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val  
 195 200 205  
 Gly Val Arg Arg Ala Met Arg Gln Leu Ser Asn Val Pro Ser Ser Val  
 210 215 220  
 Ile Ser Ser Gln Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His  
 225 230 235 240  
 Ala Ile Asn Thr Lys Ser Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr  
 245 250 255  
 Ser Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Val  
 260 265 270  
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684492SequenceListing.txt

Lys Asn Asn Tyr Ser Val Gly Met Arg Phe Arg Met Arg Phe Glu Gly  
 275 280  
 Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Ile Gly Ser Glu  
 290 295 300  
 Asn Leu Asp Pro Val Trp Pro Glu Ser Ser Trp Arg Ser Leu Lys Val  
 305 310 315 320  
 Arg Trp Asp Glu Pro Ser Thr Ile Pro Arg Pro Asp Arg Val Ser Pro  
 325 330 335  
 Trp Lys Ile Glu Pro Ala Ser Ser Pro Pro Val Asn Pro Leu Pro Leu  
 340 345 350  
 Ser Arg Val Lys Arg Pro Arg Pro Asn Ala Pro Pro Ala Ser Pro Glu  
 355 360 365  
 Ser Pro Ile Leu Thr Lys Glu Ala Ala Thr Lys Val Asp Thr Asp Pro  
 370 375 380  
 Ala Gln Ala Gln Arg Ser Gln Asn Ser Thr Val Leu Gln Gly Gln Glu  
 385 390 395 400  
 Gln Met Thr Leu Arg Ser Asn Leu Thr Glu Ser Asn Asp Ser Asp Val  
 405 410 415  
 Thr Ala His Lys Pro Met Met Trp Ser Pro Ser Pro Asn Ala Ala Lys  
 420 425 430  
 Ala His Pro Leu Thr Phe Gln Gln Arg Pro Pro Met Asp Asn Trp Met  
 435 440 445  
 Gln Leu Gly Arg Arg Glu Thr Asp Phe Lys Asp Val Arg Ser Gly Ser  
 450 455 460  
 Gln Ser Phe Gly Asp Ser Pro Gly Phe Phe Met Gln Asn Phe Asp Glu  
 465 470 475 480

684492SequenceListing.txt

Ala Pro Asn Arg Leu Thr Ser Phe Lys Asn Gln Phe Gln Asp Gln Gly  
485 490 495

Ser Ala Arg His Phe Ser Asp Pro Tyr Tyr Tyr Val Ser Pro Gln Pro  
500 505 510

Ser Leu Thr Val Glu Ser Ser Thr Gln Met His Thr Asp Ser Lys Glu  
515 520 525

Leu His Phe Trp Asn Gly Gln Ser Thr Val Tyr Gly Asn Ser Arg Asp  
530 535 540

Arg Pro Gln Asn Phe Arg Phe Glu Gln Asn Ser Ser Ser Trp Leu Asn  
545 550 555

Gln Ser Phe Ala Arg Pro Glu Gln Pro Arg Val Ile Arg Pro His Ala  
565 570 575

Ser Ile Ala Pro Val Glu Leu Glu Lys Thr Glu Gly Ser Gly Phe Lys  
580 585 590

Ile Phe Gly Phe Lys Val Asp Thr Thr Asn Ala Pro Asn Asn His Leu  
595 600 605

Ser Ser Pro Met Ala Ala Thr His Glu Pro Met Leu Gln Thr Pro Ser  
610 615 620

Ser Leu Asn Gln Leu Gln Pro Val Gln Thr Asp Cys Ile Pro Glu Val  
625 630 635 640

Ser Val Ser Thr Ala Gly Thr Ala Thr Glu Asn Glu Lys Ser Gly Gln  
645 650 655

Gln Ala Gln Gln Ser Ser Lys Asp Val Gln Ser Lys Thr Gln Val Ala  
660 665 670

Ser Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Val Ala Leu Gly  
675 680 685

684492SequenceListing.txt

Arg Ser Val Asp Leu Ser Lys Phe Ser Asn Tyr Asp Glu Leu Lys Ala  
690 695 700

Glu Leu Asp Lys Met Phe Glu Phe Asp Gly Glu Leu Val Ser Ser Asn  
705 710 715 720

Lys Asn Trp Gln Ile Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu  
725 730 735

Val Gly Asp Asp Pro Trp Glu Glu Phe Cys Ser Ile Val Arg Lys Ile  
740 745 750

Tyr Ile Tyr Thr Lys Glu Glu Val Gln Lys Met Asn Ser Lys Ser Asn  
755 760 765

Ala Pro Arg Lys Asp Asp Ser Ser Glu Asn Glu Lys Gly His Leu Pro  
770 775 780

Met Pro Asn Lys Ser Asp Asn  
785 790

<210> 62  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 62  
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22

<210> 63  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 63

gagtggggtgg agtgtgtttg  
20

<210> 64  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 64  
agttggtttt cgtttgagca t  
21

<210> 65  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 65  
cacttgaagg gtggtgccaa g  
21

<210> 66  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 66  
cctgttgctg ccaacgaagt c  
21